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ABSTRACT

This guide, which is intended for individuals responsible for designing and/or delivering workplace basic skills programs, explains the principles and procedures of curriculum development in the workplace. Discussed in chapter 1 is the importance of focusing on basic skills in workplace education and examining existing practices. Chapter 2 examines the cycle and principles of workplace curriculum development (collaborative practices and principles of good practice and adult education). Outlined in chapter 3 are the basic principles of conducting workplace needs assessments (including literacy task analyses and individual needs assessments). Chapter 4 details the steps in program design (developing and integrating curricula and setting objectives), and chapter 5 considers various aspects of the process of developing and using materials for the workplace (developing authentic materials and situations, structuring learning activities, developing integrated and content-based programs, formulating content-based models, and designing materials for multilevel groups. Checklists are included throughout the guide along with case studies on such topics as the following: integrated upgrading and training; study skills; coordination of workplace services in rural areas; performance-based training for new technologies; participatory curriculum design; and basic skills training for small businesses. Concluding the guide is a list of 74 suggested readings.
(MN)

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Understanding Curriculum Development in the Workplace

A RESOURCE
FOR
EDUCATORS

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Belfiore

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Understanding Curriculum Development in the Workplace:

**A RESOURCE FOR
EDUCATORS**

by
Mary Ellen Belfiore



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ABC CANADA supports the development of an educated, flexible, and fulfilled workforce through fostering lifelong learning.

ABC CANADA raises awareness of literacy issues, encourages workplace literacy programs, represents the private sector in public policy relating to basic skills, and supports local literacy organizations across Canada.

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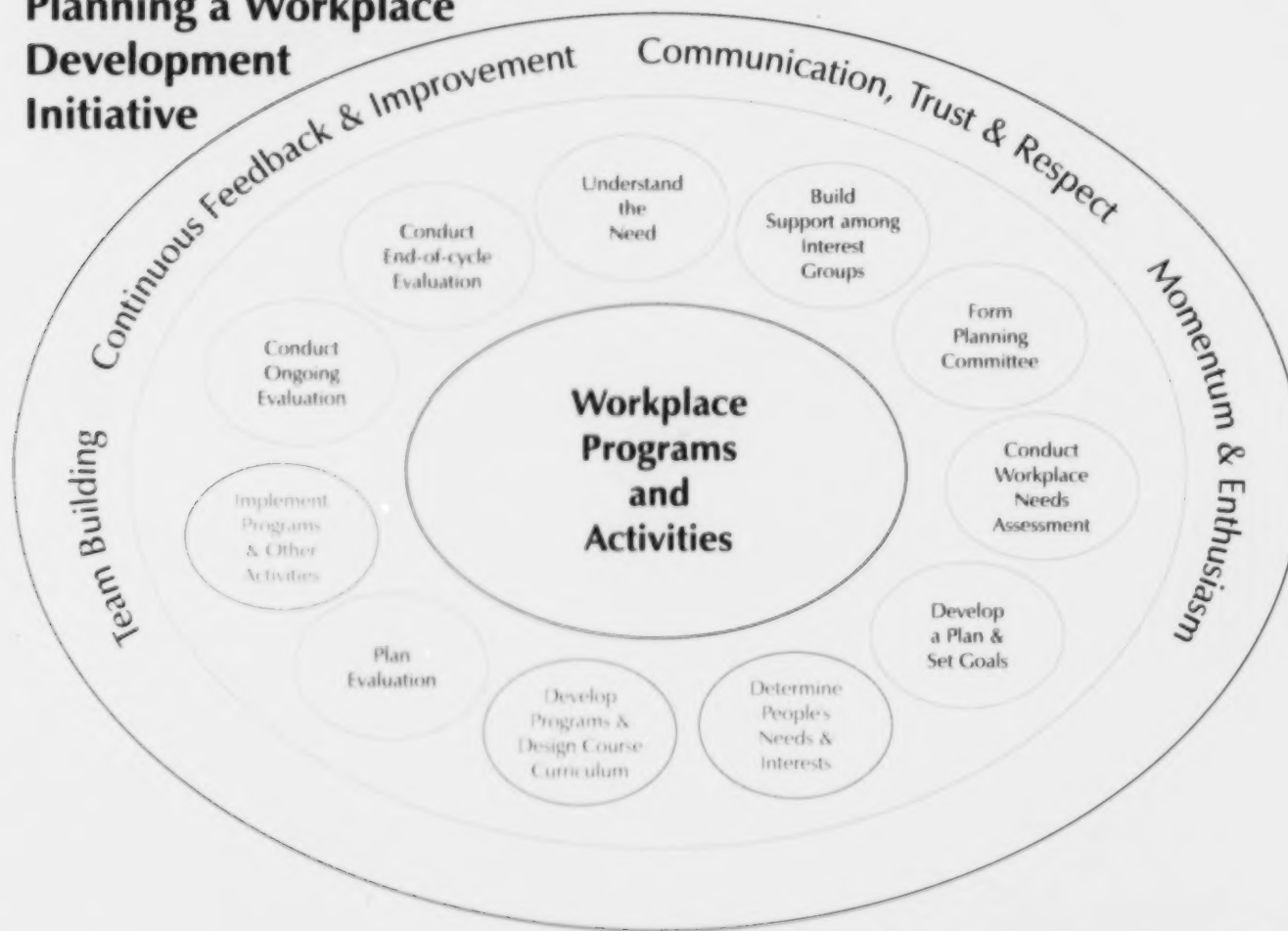
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GLOSSARY

ABE	Adult Basic Education
collaboration	The involvement of all interest groups
critical inquiry	An examination of issues to discover the tensions and power relationships in them. Ultimately, critical inquiry can give people understanding and information to help them make decisions and take action in situations that are central to their well-being.
basic-skills educator	A person responsible for various aspects of adult basic-skills education (teaching, curriculum development, needs assessment, evaluation, etc.). The educator focuses on improving basic skills using relevant work-related content or materials of personal interest to the participants. Basic skills educators can team up with trainers or subject teachers for an integrated approach to program delivery.
ESL	English as a Second Language
evaluation	Formal examination and interpretation of the elements of a workplace development initiative to determine how well it is meeting its goals. Ongoing evaluation allows an organization to improve the current initiative and to plan further initiatives. It enables informed decisions about support.
GED	General Educational Development tests cover the required skills and subject knowledge of secondary school programs. The five tests include writing skills, social studies, science, interpreting literature and the arts, and mathematics. Passing the tests is the equivalent of a high school diploma. The GED tests are used extensively in the United States and in some Canadian provinces. A number of Ontario boards of education are currently trying them out.

interest group	People in (or associated with) a workplace who have a particular interest or viewpoint in common, such as a union local, management team, or ESL group.
learning organization	A group of people who, over time, enhance their capacity to create what they truly desire to create. This is likely to involve not only new capacities, but also fundamental shifts of mind, individually and collectively. (—from Peter Senge, author of <i>The Fifth Discipline</i> , who coined the phrase)
planning cycle	A series of steps for carrying out a workplace development initiative.
trainer or subject teacher	An instructor who is responsible for delivering work-related training that is subject specific (e.g., equity, WHMIS) or technical, job specific (e.g., blueprint reading, using a computer program). The trainer or subject teacher can team up with a basic-skills educator for an integrated approach.
workplace development	Everything that is done to improve the ability of an organization and its employees to meet their goals.
workplace development initiative	A planned set of activities that respond to workplace needs and issues. Includes workplace education and training and other change-related activities.
workplace education	A generic term that encompasses a variety of basic-skills training and education programs that might be offered to employees in the workplace. Programs can include, for example, job-specific basic skills courses, work-related and personal development courses, grade 12 equivalency, study- and test-taking-skills courses.
workplace needs assessment	(WNA) A systematic way to identify all workplace needs, not just those that require an educational response.

Planning a Workplace Development Initiative



Chapter 1

Introduction

This book is a guide to developing curriculum for workplace basic skills programs. We wrote it mainly for facilitators, instructors, coordinators, and teacher trainers responsible for designing programs, teaching, facilitating learning in individualized programs, and creating workplace learning materials. We hope it will also be useful (in conjunction with the handbooks* in this series) to educators involved in other aspects of workplace development and to union leaders and management who actively promote learning at the workplace.

How will this book help you?

This book will help you to

- become familiar with principles of adult education and workplace development
- set your program within the cycle of workplace development activities
- clarify your approach to education and training
- interpret the results of needs assessments
- foster a learning environment
- design a program based on the needs, interests, and abilities of the participants
- design a program that marries workplace demands with participants' learning goals
- set overall goals and specific objectives with the group or with individual participants
- develop learning materials by incorporating authentic situations, experiences, and materials from the workplace
- integrate basic skills and technical training
- manage a multi-level group

What is this book about?

In the first two chapters we set the stage for curriculum development, concentrating on basic skills in the workplace. We define the scope of the book and look at how curriculum fits in with the rest of workplace development. We talk about collaboration and the principles that guide us. Chapter 3 deals with needs assessment, stressing flexibility of methodology to accommodate individual workplaces. Chapter 4 is about program design and how your methods will vary according to

*For titles and ordering information on the three handbooks in this series, see the inside back cover.

specific needs. Finally, in Chapter 5 we discuss the materials you will use to carry out your programs.

We encourage you to consult the references that we have found useful. Many of them are listed in the bibliography at the end of this book.

Unlike the other books in this series, this one does not follow a step-by-step format. It provides a framework for developing workplace curriculum.

The variety of methods, subject matter, and possibilities for collaboration makes workplace curriculum development exciting and informative. We hope this book will be a source of ideas, practices, and examples. For general information useful to all workplace educators, we include principles of good practice, explanations of common teaching methods, techniques for developing materials and managing groups, checklists, and suggestions for structuring learning activities.

We use case studies (drawn from different Canadian workplaces and educators) to give life to principles and practices. A particular workplace, after all, provides the context that makes its programming and curriculum unique. We hope too that the case studies will give you useful information about how to transform workplace situations and materials into learning activities.

We chose the cases and examples for their distinctive features: sectoral as well as company and union training; collaborative partnerships; rural and urban locales; different roles for teachers and different uses of subject materials; various teaching methods and techniques; different learning styles. Look for the short set of distinctive features listed with each case study.

Why focus on basic skills?

Adult basic skills education includes reading, writing, oral communication, math, and computer literacy. It also includes thinking and problem-solving skills. We distinguish basic skills education from training, by which we mean the instruction of specific technical skills needed to perform a job or to obtain credentials for work. For instance, training would describe a blueprint-reading course or an introduction to a

new computer system.

Workplace education has grown far beyond basic skills and English-as-a-second-language instruction. It now encompasses equity, conflict resolution, organizational change, leadership, labour adjustment, clear writing, and more. Although we mention these subjects here, we realize that they require their own guidebooks for thorough understanding. This book deals solely with basic skills education.

You can include basic skills in a workplace development initiative in different ways. Some programs have strictly work-related performance goals; others include personal development goals; and some, especially programs set in learning centres, aim to satisfy individual learning desires.

What is curriculum?

Curriculum is a process that includes

- setting goals for learning, based on needs assessments
- selecting subject matter and methods appropriate to the participants
- developing materials and activities for learning
- evaluating the results

Curriculum engages all the people involved in a workplace education program, especially the instructors and those workers directly engaged in learning. Curriculum involves designing a learning program, putting it into action, reflecting on its success, revising the design, putting the new design into action, reflecting . . . and so the process continues.

You can publish products that document the process and illustrate some of the steps and outcomes along the way — learners' stories, adaptations of written materials from a workplace, outlines of steps and work sheets to use in specific learning activities, and so forth.

In its most inclusive definition curriculum accounts for and directs attention to cultural diversity and other differences that affect learning (gender, class, race, learning styles, prior experience, for example). Workplace curriculum developers commonly consider the impact on the workers of workplace materials, training, and systems. For instance, what would be

See the discussion and illustrations of "spirals" in Chapters 4 & 5.

Sue Shore in *Positively Different* speaks of an "inclusive curriculum" as "all the institutional practices affecting learners' experiences once they have enrolled in an adult literacy, language, or numeracy course."

the effect of biased work-related materials in technical training programs? To what extent should a workplace educator be involved in promoting equity, maintaining balance in workplace relations, and educating for change?

❖ *Examine your own practice*

Think about your own practice and experiences in workplace education. The following questions will help to guide you.

- Review the bulleted list on page 1. *Which points are familiar? New? Which do you want to rethink as a workplace educator?*
- *What has been the educational direction of your workplace programs? Have your programs for basic skills been related to work? . . . integrated with technical training? . . . aimed at personal development? . . . linked to overall organizational change and commitment to ongoing learning?*
- *What does your definition of curriculum include? Does it include a process? . . . a product? . . . materials for teaching? . . . an approach to education and methods of instruction that fosters certain values and attitudes?*
- *Do you want to know what learning materials are available? . . . what industry-wide needs assessments have been done? . . . what resources can give you more ideas on curriculum development? Check out the bibliography (pages 61–66).*

Chapter 2

Framing Workplace Development

Being part of a workplace basic skills program makes you aware of how much it differs from adult upgrading courses in local high schools and colleges.

Effective workplace education differs from other forms of adult upgrading.

- Workplace programs are highly contextualized; that is, they depend on who wants to learn what, under what conditions, and for what reasons. Our case studies in this chapter illustrate how distinct a program can be when created within and for a specific work environment.
- Education in a workplace is developed through a planning cycle, with all the interest groups participating at each stage.
- Workplace programs succeed only when collaboration infuses all the activities.

Although workplace education operates within its own framework, we do share with other adult educators the basic principles of adult education. In this chapter we set curriculum development in the cycle of workplace planning, discuss principles of good practice in workplace education, and review principles of adult education.

❖ *The cycle of workplace development*

In this book we concentrate on designing programs and developing teaching and learning materials. The diagram on page x (opposite page 1) shows how these activities fit into the planning cycle.*

Although needs assessments take place before education programs begin, participants continue to monitor needs and revise the course design while they learn. Needs assessments include workplace needs assessments, job-related analyses

*See the two handbooks in this series *Collaborative Needs Assessment* and *Collaborative Evaluation* for thorough guides to other steps.

Collaborating on curriculum development

Check out the facing page for a checklist of collaborative practices for workplace educators.

(such as a literacy task analysis), individual needs assessments, prior-learning assessments, and intercultural assessments.

Evaluation is planned early in the cycle. This ensures ongoing evaluation from the implementation stage throughout the entire workplace initiative. It also assures interest groups that evaluation is important for improvement, continuity, and accountability.

Our programs and activities are positioned in the planning cycle to encourage *collaboration* throughout: before they begin, during their lifetimes, and after they are completed. Collaborating on curriculum development means that as educators we work with the stated interests of employees, union, and management to offer relevant workplace programs in a supportive learning environment. Collaboration keeps everyone involved. It creates and maintains interest and commitment from all parties, especially when dealing with difficult issues (such as conflicting goals).

❖ *Principles in workplace development*

The cycle diagram and checklist are planning tools that remind us to pass through each stage of development. We also need *principles* to guide us, especially when making decisions in complex situations or when faced with conflict.

You've been working with an education committee in a small manufacturing firm throughout the planning of a workplace needs assessment. Collaboration is new for many members of the committee, who are used to working alone. With a lot of effort the committee has gained a sense of itself and its mission. An announcement for the workplace needs assessment has gone through many revisions, and the committee has agreed on its final form.

Just before the announcement is to go out, the president of the company decides without consultation to rewrite it. What is your response as a committee? Do you accept the president's rewrite, go through another revision, invite his input on a collaborative basis?

Principles help us frame the questions and see problems impersonally, and they guide us toward solutions.

Checklist

Collaborative practices for workplace educators

- ☐ Set up an advisory or development committee (with representation from all interest groups) to oversee the planning
- ☐ Establish rules for discussions, decision making, and distribution of work in the committee
- ☐ Follow the stages in the planning cycle from start to finish (see Figure facing page 1)
- ☐ Have a contact person on the committee for regular updating
- ☐ Set up a system to disseminate information among committee members and among the workforce about education initiatives
- ☐ Decide how to get feedback from the workforce on announcements and program information
- ☐ Ensure that participation in needs assessments, programs, and evaluations is voluntary and confidential
- ☐ Confirm the program goals with participants, immediate supervisors, stewards, and technical trainers
- ☐ Keep in touch with supervisors, stewards, and trainers to get updates on progress, changes, unexpected needs, etc.
- ☐ Ask for copies of all the mail that the workforce gets — for your information and for authentic learning materials (having your own mailbox could be useful)
- ☐ Ensure that the curriculum is flexible enough to deal with new needs and on-the-spot concerns of program participants

Our principles of good practice are the result of experience, dialogue, and reflection by educators and their partners in the field. These principles are still evolving.

Principles of good practice

Participation of all interest groups

We need the ideas, support, and vision of as many people as possible. If employees, union, management, and educators are collaborating on new ideas for learning, then they are more likely to see how vital ongoing learning is for their own concerns.

Equality of opportunity

Our planning is sensitive to systemic barriers that block full participation in culturally diverse workplaces. Gender, age, experience, ethnicity, race, etc. are considered throughout workplace development. Our own actions as planners and curriculum developers are models for inclusive strategies.

Respect for all

We show respect for everyone involved by honestly considering their views, valuing their experience, and accepting their contributions. We also avoid language that portrays people in a deficit model (illiterate, deficient, lacking skills, remedial). Participation in programs and needs assessments is always voluntary, the results confidential. Respectful behaviour builds a sense of security, creates comfort and trust, and acknowledges learning through experience.

Employee orientation

Workplace education programs start with the employees. Curriculum development stems from their needs. Their ability to participate and advance in their work, home, and community life may be the ultimate issue. Program participants work collaboratively with all interest groups to identify needs, set clear and measurable goals, learn, and evaluate their efforts.

Integration of activities

At the workplace development level, all the separate activities (basic skills training, clear-writing seminars, access policy development, technical training, etc.) arise from a common plan. The resulting advances in education build on one another to create a learning spiral with an effect greater than the sum of its parts (see page 48).

At the curriculum level, subject matter (work-related or

Nourishment of a learning culture

personal) and basic skills can be linked in various ways so that participants get the skills they need while gaining specific knowledge — learning thus becomes more effective, relevant, and challenging.

Education changes people; change requires further collaboration, training, and review. To be ready for the future and inevitable changes, organizations foster a learning culture at the workplace. In a learning culture, everyone is a teacher and a learner. Participants in basic skills programs teach us about their own work experiences and their life needs. Our learning from them is crucial to a relevant, flexible, and accessible curriculum.

Engagement of educators in the workplace culture

Workplace educators are asked to intervene in a complex system of work activities, personal and social relationships, reorganizations, and visions for the future. We have to be culturally attuned to hear the different voices and speak to the many people. With flexibility and inventiveness we can transform our skills from single-discipline (ESL, ABE) to integrated (linked skills, multiple activities to reach a goal) programs. We encourage participants to suggest multiple approaches to issues of concern.

Principles of adult education

Our principles of adult education reinforce good practice in the workplace and help programs achieve consistency in theory and practice.

Learning is self-directed

In a supportive learning environment adults can direct their learning by assessing their own needs, evaluating their past experiences, and choosing goals for themselves. The basic skills curriculum is driven by their experiences, their choices, and their issues. Finally, the adult learner voluntarily engages in change and evaluates the results.

Content and method are suited to adult learners

What adults learn (the content) and how they learn (the method) are directly related to their needs and learning styles. The content is relevant and important to learners. The methods meet their current abilities and styles. As educators, therefore, we draw on a variety of teaching methods and a

**Curriculum is
an ongoing process**

range of knowledge to engage adult learners.

Change is a consequence of learning. Our curriculum is open enough to accommodate the unforeseen needs and the new visions that surface as adult learning progresses. In this sense learning is a trigger for more learning — truly lifelong.

**Reflection and
critical thinking are key**

Adult learning materials and methods allow time and space for reflection — to assess the gains, identify the difficulties, and prepare for the next step.

Thinking skills are central to every aspect of adult life, from deciding how to approach a supervisor about a suggestion for change to helping one's child deal with a bully at school.

By being involved in directing their own learning, people have an opportunity to develop critical thinking skills. Program participants consider issues of concern first in terms of their own experience, then through gathering information, analysis, and discovery. They learn in this way to pose questions, identify problems, analyse information, decide what to do, and finally act on their decisions.

**Case studies show
workplace variety**

The case studies that follow introduce some of the differences in workplace basic skills education. They illustrate how different the role of the basic skills educator is from one setting (sectoral training programs in the auto and construction industries) to another (a workplace learning centre). They also highlight unusual partnerships — competing companies join forces; peer trainers give equal weight to union and corporate views on industrial issues. Two rural programs show how small, scattered populations can be serviced.

Summary

Principles of good practice in the workplace

- **Participation of all interest groups:** Workplace education serves members of interest groups only if the groups all take part in developing it.
- **Equality of opportunity:** We strive to eliminate systemic barriers to full participation in workplace development.
- **Respect for all:** We value and encourage the opinions, experience, and contributions of everyone in the workplace.
- **Employee orientation:** The needs and goals of employees form the basis for workplace curriculum.
- **Integration of activities:** Successful curriculum combines basic skills and specific knowledge.
- **Nourishment of a learning culture:** We all teach and learn from each other as we continually plan for and adapt to change in the workplace.
- **Engagement of educators in the workplace culture:** The effective workplace educator is attentive, inventive, and flexible.

Principles of adult education

- **Learning is self-directed:** Adults want to be in charge of their own lives.
- **Content and method are suited to adult learners:** Materials and techniques are relevant to people's lives at work and home.
- **Curriculum is an ongoing process:** Learning leads to more learning.
- **Reflection and critical thinking are key:** Adult learners need tools to help them deal with the issues in their lives and communities.

Case study

Distinctive features:

- examines industry, changes, and workers' roles
- integrates subject matter and basic skills
- weights union and corporate views equally
- uses peer training; train-the-trainers component
- runs for 3 years with 3 levels of training

*All quotations are from the Statement of Goals and Objectives of the Automotive Parts Sectoral Training Council.

Integrated upgrading and training in the auto parts industry

Under the auspices of the Automotive Parts Sectoral Training Council, an Auto Parts Certificate Program gives production workers an opportunity to upgrade. The three-year program "incorporates upgrading in math, language, and communication skills within a focus on the state of the industry, computer technologies, and production materials and processes."*

The program is "co-determined and co-managed" by the Automotive Parts Manufacturers' Association and the Canadian Auto Workers Union. Views of both union and management are put forward as "legitimate and independent interests" by the trainers, who maintain a balance of views in the classroom. They facilitate learning by encour-

aging participants to understand differences and reach their own conclusions.

The trainers are production workers. They have been approved by both management and the union and have completed a train-the-trainers program, including apprenticeship.

Levels 1 and 2 of a three-level program are now being offered (1995). The program is open to employed production workers in the auto parts industry who volunteer to attend one week (40 hours) of training per year. The subject matter includes profiles and trends in the auto parts industry; production processes and work organizations; and communications and interpersonal relations.

Case study

Distinctive features:

- on-site learning centre open to all employees
- variety of programs for work and personal development: computer training, career counselling, ABE, GED . . .
- individualized, self-paced, confidential structure

Learning centre in a city newspaper

The Learning Centre at the Calgary Herald resulted from a company commitment to comprehensive staff development program for all employees. A new emphasis on basic learning needs in math, communication, and computers extends throughout the organization. Basic-skills training is solidly positioned in the learning culture at the Herald. Training is key to job mobility, and the Centre supports training initiatives for new responsibilities, new jobs, and workplace reorganization.

Twenty-four-hour access to the Centre accommodates shift work and the irregular hours of many newspaper employees. Alberta Vocational College, in partnership with the Herald, makes an instructor available for consultation three evenings and two afternoons a week.

Many employees use the Centre for help with computers: introduction to computer use, word-processing, software support, and keyboard training. Other courses include basic accounting, reading

and writing skills, GED, and pre-apprenticeship training in math and science. The Centre also offers résumé preparation and a career counselling course for employees who have been laid off and for those on disability leave.

Group seminars with concentrated learning time on writing and computer software have been popular. Topics have included business writing (letters, memos, grammar, organization), plain writing,

and DOS. Instructors from the Centre also help employees individually at their workstations.

Now that the Centre is established and operating regularly, it hopes to attract more employees from the production and distribution departments, to develop special programs related to the work of individual departments, and to experiment with learning contracts suited to employees in the unique Herald workplace.

Case study

Distinctive features:

- fixed time for study skills workshop in carpenter upgrading
- focus on time management, study skills, test taking
- basic skills trainer linked to subject trainer

Curriculum materials are available from this project. See the bibliography.

Study Skills component in construction trades training

SkillPlan is a joint labour-management organization of the British Columbia Construction Industry Skills Improvement Council dedicated to meeting the basic-skills needs of its workers. One of its many initiatives is the Study Skills component, a three-session workshop now part of the trades qualification course for carpenters.

Workers who did not gain "journeyperson" status through the apprenticeship system but who have substantial experience in the trade are required to write a Trades Qualification exam. In the past some workers — not used to standardized written tests in high-pressured testing situations — have been reluctant to take their qualifying exams.

The Study Skills component helps participants in the trades course learn "how to" strategies: how to care for your health under pressure;

how to manage time and family relationships for effective study; how to take notes during class; how to read complex material and take notes. It also covers test planning, memory techniques, and test taking.

A basic-skills instructor, who meets the group three times during the course, covers introduction to study skills and note-taking, checkup on skills, and finally (prior to the qualifying exam), test-taking skills.

This type of intervention yields additional benefits. The trades trainer learns how to incorporate basic-skills strategies into the trades course. Workers can learn how to learn. Those workers who identify new learning needs and interests can work individually or with small groups in a new SkillBase project at a training centre.

Case study

Distinctive features:

- strategies for learning technical vocabulary embedded in trades qualification refresher course
- preparation for trades exam
- adult educator as course participant and model note-taker

Curriculum materials are available from this project. See the bibliography.

Case study

Distinctive features:

- partnership between two competitive companies
- participants scattered throughout rural Manitoba
- program scheduling determined by seasonal demands of grain industry

Concrete words — the language of cement finishing

Concrete Words is a basic-skills program run by the British Columbia Construction Industry Skills Improvement Council (SkillPlan) as part of a trades qualification refresher course for cement finishers. Workers who have been on the job for twenty years or more are now obliged to get their trades qualifications by passing a three-hour, multiple-choice exam that tests their trade expertise. Workers in the course may not have seen the trades vocabulary written in English, or they may not be familiar with multiple-choice tests.

The adult educator working with the trades trainer offers the participants a variety of strategies for note-taking, test taking, and learning the technical vocabulary presented in the refresher course. One role of the adult educator is that of "experienced note-taker" in each class. The classes are fast paced, and participants have to listen with full concentration, figure out what's

going on, and take notes. The experienced note-taker sits with a small group and writes notes as the lecture goes on. Participants see note-taking skills, they see their trade vocabulary written in English during the class presentation, and they learn how to organize material for later study.

The trades instructor has an opportunity in class to review the educator's notes. Have the main ideas and important details been captured and emphasized? The participants not only learn the value of good note-taking but also review key points. Blending the expertise of the trades trainer with that of the adult educator contributes to a balanced partnership of workforce education.

Follow-up sessions with a tutor give participants more opportunities to work with the technical terms, review notes, and identify anything that needs further clarification.

Communication skills for prairie grain elevator operators

The Communication Enhancement Program began as a partnership between two competing grain companies: the Manitoba Pool Elevators (MPE) is a member-owned, unionized co-operative; the United Grain Growers (UGG) is a private, non-unionized company. In 1992, they examined the need for improving

literacy and numeracy for grain elevator operators because of the demands of technological and structural changes. Both companies were positive in their support, emphasizing the importance of building on existing literacy skills.

They insisted that there would be no testing to determine literacy

levels and no additional needs assessment interviewing. They also required approval of part of the curriculum before the course began.

A work-related basic-skills program was designed. Skills included report and letter writing, reading, presentation and conversational skills, math skills, and computer use. Some of the topics were marketing, public and customer relations, grain grading, chemical use, and future concerns of the industry.

MAE offered the course in central locations in designated regions. An off-season 10-week session provided 50 hours of group class time and 30 hours of home study. The class time was directed to introducing and clarifying literacy tasks required for this workplace. The home study provided time for consolidation of material, tutorials, and feedback on progress. The course progressed from basic-skills strategies to student-generated scenarios

that incorporated many literacy tasks. The course was highly motivational in that it allowed participants to bring their work-related expertise to the group.

Participants varied a great deal in educational background, years of service, and job responsibilities. Ongoing reflection and evaluation were important to the success of the program — curriculum was revised according to the needs and developing interests of the participants.

The final curriculum incorporates skills and material applicable to the wide spectrum of needs and interests across all the groups. Commitment from MPE management for employee time and financial resources has ensured the program's ongoing success. MPE has contributed more than 9,000 employee hours and \$120,000 in program development and costs (to June 1995) and is assuming management and total responsibility for the program.

Curriculum materials are available from this project. See the bibliography.

Case study

Distinctive features:

- coordinates education services independently and neutrally
- creates new partners in learning
- promotes workplace education for whole community
- facilitates needs-based program development

Coordinating workplace services in a rural area

The Workplace Education Project (WEP) in Peterborough, Ontario, has carved out an unusual space for itself as an independent and neutral coordinator of academic services for workplaces in the area.

WEP aims to expand education opportunities beyond the traditional high school credit courses. It offers assistance to employees in gaining secondary school credits as well as math and English upgrading in preparation for enrolment in credit courses, ESL, independent tutoring, and health education. It also facilitates specific skills programs

such as report writing, metric measurement, and introductory computer courses.

WEP promotes workplace education, raises awareness of the need for continued education, and links education institutions and private contractors with companies.

For the local company, WEP will consult with management and union and make presentations to employees on education services. It conducts individual needs assessments with interested employees and develops individual learning plans if required. After reporting its

findings to the company and union, WEP arranges meetings between company representatives and education providers who can submit proposals directly to the company.

WEP promotes existing classes or services whenever possible and facilitates class arrangements, sometimes combining employees from different companies to enable courses that otherwise would not be available. WEP also liaises with the instructors, bringing them together periodically for workshops and sharing sessions. Follow-up

with employees provides the feedback necessary to see if needs are being met and to identify emerging education opportunities.

WEP has made it possible for business, labour, education institutions, and community literacy agencies to form partnerships and to promote community involvement through co-operative action. With its extensive knowledge of local education services, WEP is the centre for growth in workplace education in Peterborough and surrounding area.



Chapter 3

See the bibliography for guides and references on different kinds of needs assessments. The workplace needs assessment is covered in detail in *Collaborative Needs Assessment: A handbook for workplace development planners*.

Interpreting Needs

Do needs assessments as required

Various types of needs assessments tell us about the needs and goals of the organization and the workforce. The overall workplace needs assessment sets the stage for other, more specific assessments such as a literacy task analysis, individual assessments, and intercultural assessments.

Workplace needs assessment

The workplace needs assessment (WNA) gives you two crucial views of a workplace: the big picture — context, dynamics, visions, and operations; and the close-up — specific programs and activities that could meet the learning needs of the organization. The WNA also establishes a working committee of people who become advocates for basic skills education in the workplace.



Get to know your workplace

During the WNA the following activities fit in naturally with the initial stages of the planning cycle. They help you become familiar with the workplace and how it works (they can also yield useful information later while programs are running). You learn about the requirements for effective performance, relationships between employer and employee, and the outlook for the future.

Instructors will find the information, experiences, and workplace materials invaluable in creating learning materials.

Tour the workplace

Tour the work site to get an overview. In a complex organization several short tours could be more informative. Notice how jobs interlock, how timing and co-operation affect the flow of work, and how the use of space affects work. Where are announcements posted, and what visual displays are used?

Observe the workplace in action

Use your tour as an opportunity to meet people, advertise workplace education, and familiarize people with what you do.

Ask for a tour of the local union office to meet staff and executive members.

Spend a few hours (or days) observing, either as a silent onlooker or as a participant. Some educators ask to accompany workers through their tasks; others try to perform the job themselves to understand the demands of the work.

Look for the unseen demands of the job: time pressure, repetitive physical work, environmental aspects (noise, proximity to other workers, opportunities for communication, etc.), verbal and nonverbal communication, and so on.

Ask to attend meetings (an orientation session for new employees, for instance) that might help you understand how the workplace operates.

Review written and other visual materials

Ask to see written materials that are commonly used in the workplace — manuals, newsletters, memos to the workforce, etc. The organization may also have video materials about the operation, job-specific activities, or its community involvement. What issues are currently being discussed, and what print or visual information is available?

A checklist for reviewing documents for clear language can be found in the *Collaborative Needs Assessment* handbook in this series.

Ask the union for similar information. What are the currently important issues?



Gather workplace materials

Use the checklist (page 19) of workplace materials — print, audio, experiential — to review your own collection.

The checklist of workplace materials is on the facing page.

Checklist

Workplace materials (from management and union)

Print

- ☐ site maps and plans
- ☐ advertising brochures
- ☐ posters
- ☐ employee handbooks (history of the organization, regulations, etc.)
- ☐ benefit plans
- ☐ health and safety manuals
- ☐ training manuals
- ☐ fire regulations
- ☐ payroll slips
- ☐ newsletters, newspapers
- ☐ job descriptions
- ☐ instructions for operating equipment
- ☐ descriptions of other procedures or processes used in the workplace
- ☐ job-specific written materials (forms, memos, menus, code books)
- ☐ annual reports

Audio, video, and other sources

- ☐ presentations for orientation, staff development, on-the-job training
- ☐ advertising
- ☐ staff meetings — you could be an observer or participant
- ☐ employee presentations to groups
- ☐ job-specific presentations — given by or for learners in the workplace



Conduct assessments

Literacy task analysis

A literacy task analysis determines the literacy and related basic skills required for the tasks (reading a code or inputting data, for example) in a job. You can use the resulting inventory to identify gaps, where employees need skills upgrading. In some cases you will ask workers to assess their own abilities, either in general or as they relate to particular tasks.

Educators find such analysis useful when new job responsibilities arise because of technological change; when cross-training, promotions, and transfers become important; or when retraining older, experienced workers for new jobs.

A literacy task analysis can give a broad view of jobs, a detailed account of a job, or a comparison of jobs. Or it can examine a few key tasks. Different techniques (such as interviews, daily logs, task descriptions, task matrixes, flow charts) can meet different purposes.

Who? What? Why?
A note of caution on the use
of literacy task analyses

A literacy task analysis subdivides work into discrete tasks with their requisite skills. As an information source for curriculum development, it fits well with workplace training, which deals with discrete tasks learned in a sequence.

Workplace education, on the other hand, demands a more holistic understanding based on the social and technical organization of work and the interrelations of tasks, people, and procedures. Therefore, we recommend that a literacy task analysis be used cautiously and always with an eye to how the entire workplace affects the jobs under analysis.

To set the scope of a literacy task analysis you must know the purpose and audience. You may need only an informal description of tasks from your learners and supervisors rather than a lot of data to be analysed and summarized. Ask yourself these questions before you decide on the breadth and depth of any investigation.

- *Do you have to raise awareness of how many tasks involve basic skills?*

- *Does the organization need statistical data to make a case for financing education? Is it already aware of basic skills needs? Is it committed to training in certain areas?*
- *Who needs what kinds of information? Why? How will they use it?*
- *Is the organization aware of your beliefs and practices as a workplace educator?*

Individual assessments

What are the workers' strengths and what opportunities do they have to do their best? Employers are concerned about hiring and developing a workforce that can operate in a climate of change, build on its strengths, and use change creatively.

Some employers, in an effort to upgrade their employees or ensure safety of employees and clients, fall back on such traditional methods of assessment as standardized testing, which has little if any relevance to the specific needs of a changing workplace. Standardized tests were designed for large-scale testing across populations to compare proficiency or ability. They often highlight shortcomings; they do not yield information about the strengths and needs of an individual person in relation to a specific job.

Emphasize the positive

The aim of individual assessment is to see how well people perform tasks. By emphasizing the positive we provide opportunities for people to do their best.

- assure confidentiality of all information
- request one-on-one assessment as the most preferable
- start from a worker's current experience
- choose relevant content from a person's work and life experiences
- look for strengths
- explain what you expect the participant to do (give examples on paper of matching, drawing lines, etc.)
- explain format or process if unfamiliar to participant
- demonstrate, using an example before participant begins

Customize individual assessments

A national review of types of individual needs assessments is being prepared for the National Literacy Secretariat by Georgian Learning Associates Ltd. It will be available in 1996. In Ontario, the Workplace/Workforce Equity Basic Skills program will produce a manual describing an individual assessment process for employed and unemployed learners. The manual *Goal-Directed Assessment: An Initial Assessment Process for WIWEBS Learners* will be available in 1996 from OTAB, the Ontario Training and Adjustment Board.

See Chapter 4 (page 37) for a discussion of "high-performance" workplaces.

- stop when the work gets too difficult so participant is not faced with impossible tasks
- score items only when necessary; a summary of present skills and those that need to be learned is more useful
- review summary of skills with the participant

An individual assessment of basic skills should have customized components drawn from the workplace or from the personal and community life of the participant — reading a local school notice or a workplace bulletin; writing reactions to a picture from a local newspaper or a description of an accident at work; using math for family budgeting or for measuring on the job; discussing a problem and suggesting solutions. To identify shortfalls in a person's work skills, use relevant work materials.

A manufacturing firm decided to introduce bar codes to improve production. The workplace educator read the new manuals, talked to the supervisors and trainer, observed the workers on the job, and saw a demonstration of the new equipment. She and the trainer listed the basic numerical and reading skills needed to use the new system. From their list they developed an individual assessment to identify gaps between a worker's current level of basic skills and that necessary for the new job. This portion of the assessment began with the familiar — math and reading tasks that were part of the current job — and then moved on to the unfamiliar.

With the evolution of high-performance workplaces, educators, in collaboration with labour and management, have redefined basic skills to include higher-order skills — organizing, forming strategies, solving problems, thinking creatively. You can assess these skills along with reading, writing, math, and oral communication by asking some new questions. Discussing common problems encountered at work or at home can reveal how people use these skills and how they prefer to communicate.

A real example from a person's experience will reveal behaviours and skills more accurately than a hypothetical situation will. You might ask, for example, What do you do when you have a recurring problem with a co-worker, colleague, or neighbour? Can you tell me about a real experience of your own?

Responses might range from seeking outside help (talking to the supervisor or calling the city councillor) to trying to understand what the disagreement is all about and approaching the other person. What do the responses show about approaches to problem solving and thinking creatively?

Other types of assessment

Educators recognize the need to improve basic skills assessment of experienced adults. *Portfolio assessment* is one commonly used method. A portfolio documents a learner's skills, knowledge, education plans and goals, learning styles, and self-assessments. In compiling portfolios participants explore past experiences, set education goals, choose samples of their work to illustrate variety and quality, and evaluate their progress. Portfolio development is a collaboration between teacher and learner. Together they decide what it will include, what procedures to use for ongoing creation, and how the documentation will be used.

In some workplaces each learner documents the phases of learning: needs assessment, goals, tracking progress, examples of the learner's work, self-evaluations, and course evaluations. Some educators refer to this as "seamless" assessment, in which assessment and learning are not differentiated but woven together.

Computer-assisted assessment is also gaining popularity, especially for learners interested in working toward their high school diploma or college entrance. This is most frequently a form of standardized testing, although some programs may allow for new items to be added. Learning centres often house computer software to provide self-paced learning materials for assessment and upgrading.

While serving specific populations of workers with limited needs, computer software alone has not replaced some essential components of adult education. Face-to-face interaction allows unforeseen issues to emerge, and participants have opportunities to consider other people's ideas, respond, and collaborate. We recommend that computers be supportive rather than central components in an education program.

Materials are available to assist teachers and participants in portfolio development. See the bibliography for titles and authors related to assessment.

❖ *Interpret the information you have gathered*

Now that you have information from initial needs assessments, the next step is to make sense of it. Qualitative information from a WNA will be in the form of stories, anecdotes, opinions, arguments, and histories of change and innovations. You may also have quantitative data from a literacy task analysis (for example, the percentage of workers who define reading tasks as key to their jobs).

Look for patterns

First, look for patterns — similarities of views expressed by the different contributors and resource materials. What issues, problems, and solutions come up repeatedly? What common requirements for a satisfactory work, home, and community life are mentioned? Do your own observations at the workplace confirm these patterns? Is there agreement among the major interest groups: employees, employers, and unions?

Do your statistical data support your findings, or do they point to needs and interests that have not been identified by your other sources? Do most employees who say they want to improve their math skills use math on the job? Do employees report that their reading and writing skills are adequate for the job when other assessments seem to indicate otherwise.

Look for mismatches

Next, look for mismatches. Are goals significantly different from one interest group to another? Are difficulties perceived differently? Do ideas for solutions involve very different approaches? Are issues framed differently?

Find the common ground

Why look for patterns and mismatches? You are one of the few people who have sampled the diverse views in a workplace. If you can understand to some degree why people hold certain views, you can possibly find the common ground, their overlapping interests. Usually their points of view are not mutually exclusive. Common interests might include maintaining good production standards so the company will thrive; wanting others to listen and understand, without necessarily agreeing; finding a way to meet change that maintains self-respect; giving everyone opportunities to learn.

The Auto Parts Certificate program (referred to on page 12) is an example of programs that not only recognize the common interests of the manufacturers and the union but also respect the separate, sometimes conflicting interpretations of issues.

Finding common ground is the basis for creating solutions that no single contributor may have suggested yet. Your solutions will probably be a mix of organizational change activities (equity policies, increased access to training, and clear-language policies) and learning programs (diversity programs, seminars in clear-language practices, a basic-skills program, technical training, and study skills) that will benefit both the workplace and the workers.

Finding unique solutions
for each workplace

Remember, problems must be solved in the context of the individual workplace. A solution for a problem in one workplace may not succeed in the next. Our job as workplace educators is to encourage ongoing discussion so that the education solutions that emerge are mutually acceptable and can be supported by everyone.

Case study

Learning facility at a lumber mill

The New Westminster Division (NWD) of MacMillan Bloedel in British Columbia began to look into basic skills needs in 1993. New technologies and downsizing by seniority changed the work system and communication patterns in this lumber mill. Both management and union expressed an urgent need for training and retraining, as the workforce was now stable but aging. A Skills Enhancement Training (SET) committee investigated

the need for employee development, which began with reading, writing, math, and ESL, but grew to much more.

The SET committee worked carefully, ensuring that decision making was by consensus and that participation in the needs assessment was voluntary and confidential. Thirty-five percent of the workforce participated in the individual interviews and eight focus groups at the mill. Here are some of the results.

Key findings in WNA

- Workplace characterized by technological change, fewer employees, increased production, high pressure, and long-term insecurity about jobs
- Communication difficulties caused in large part by diversity issues

Policy and process recommendations

- Communication of primary concern; training needed in face-to-face, radio, telephone, and written forms.
- Opportunities to enhance skills would lead to better communication, less isolation, more involvement, more promotions, and better morale and attitude
- Resentment expressed by some employees, who thought that supporting basic skills upgrading and ESL training would jeopardize their own training needs
- Barriers that might prevent people from upgrading included fear, pride, shift work, and lack of time or motivation

Training needs

- Start small but not too small — people need to see the program is for everyone
- Part of training time should be paid, not just by seniority but for anyone who volunteers to take part
- Make reading and learning part of everyday life at NWD
- Make NWD a safe place to learn so that trust and confidence will grow
- SET is a people program, not just a skills program — participatory, respectful, voluntary, contextual, and confidential
- Plan for evaluation and financial self-sufficiency; ensure short- and long-term planning
- Diversity and communication training for everyone in the long-term, but immediately for supervisors and leaders in management and the union
- Spoken-English pilot program for advanced ESL and native speakers
- Clear-language training for people who communicate in writing
- On-site instruction, support, and encouragement for employees entering formal education programs at any level. Support to include buddy system, shift accommodation, goal-setting and time management assistance, study skills, learning centre
- Computer applications — introduction to computers, in-house systems, computer as a medium of instruction
- Fixed, comfortable space for learning, with resource material

This case study is excerpted from a report by Tracy Defoe and Sue Folinsbee (1993). See the Needs Assessments Reports section of the bibliography.

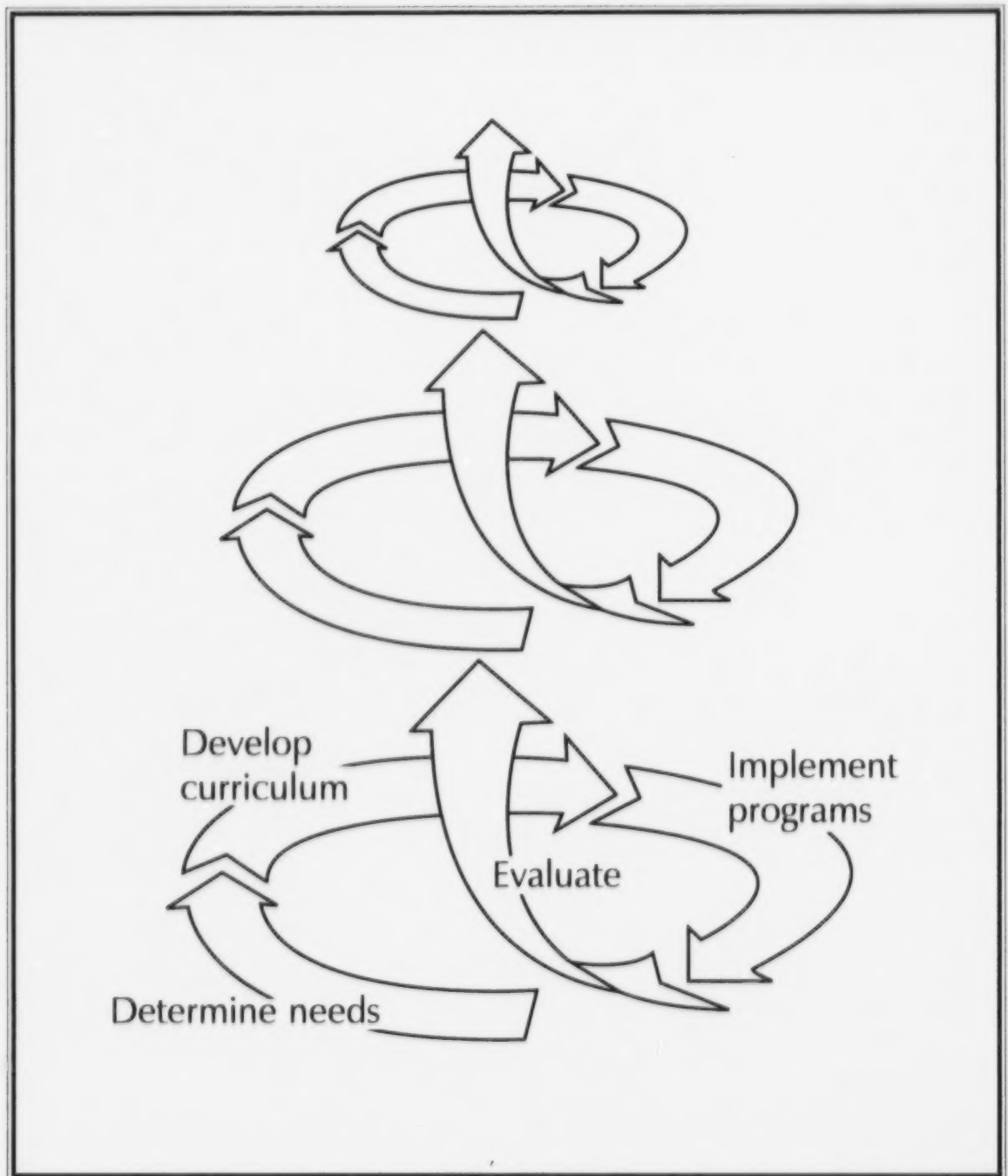
The SET Committee worked to establish a customized three-room learning centre in a trailer at the mill. During the centre's first year SET sponsored a Valuing Diversity workshop for invited volunteers selected as potential leaders representative of the diversity of people in the division. Small-group study has begun to improve spoken communication and workplace writing using a process-writing approach. Instruction in math, reading, writing, GED, and basic computer use is ongoing (individually or in small

groups). Employees use the trailer for individual study, getting help with correspondence credit courses, and for individual tutoring on specific needs.

In its second phase SET will continue these services. It will also work toward meeting more needs, including those relevant to the company's business plan. SET's overall goals are to develop leaders for positive change, to improve the work climate and culture, and to assist individuals and groups with education and training.



A "planning spiral" for curriculum development in the workplace



Chapter 4

Designing a Program

The diagram facing page 1 shows program design and curriculum development midway through the workplace development planning cycle. If you think of this diagram as spiraling upwards so that the activities recycle and reappear in modified fashion, then each activity leads to and informs the next, creating some variations with each turn of the spiral.

As long as the program continues, design and curriculum are always being transformed by ongoing evaluation and reviews of needs. Curriculum development draws on our whole knowledge of the workplace — its goals, operations, relationships, and, most importantly, its people.

Every program that you mount in a workplace (clear writing, ESL for nurses, health and safety for bricklayers, high school diploma courses, for example) has its own mini-spiral. Participants in each program have to define their needs, set their learning objectives, contribute to the development of materials for study, assess their own progress consistently throughout, and evaluate the whole effort. Once set in motion these components form one continuous spiral, rather than separate, sequential acts.

The figure on the facing page is one way to visualize the spiral discussed here.

Consider your own practice

In this chapter we look at some different approaches to curriculum development in the workplace, and we consider ways to set goals. First, think about your own practice in curriculum development.

- *Who sets the goals in your programs? How are they determined?*
- *How do you describe goals? Do they relate to performance of tasks in the job, home, or community? How do they lead to action?*
- *What has "success" meant for you and the participants in your workplace programs?*
- *Is your curriculum designed ahead of time? Does it emerge within the context of the program? Some of both?*
- *How do you and your participants assess learning?*



Curriculum design: approach and practice

How your approach to education affects your practice

Our approach to adult education underlies our principles of good practice, listed in Chapter 2. If you believe adults learn to improve the “self” as well as to gain new skills, then your curriculum materials will provide not only job-specific skills but also opportunities for self-discovery. If you believe that adults’ past experiences form their attitudes toward learning, then you must examine those experiences at some stage of curriculum development — in needs assessment, learning-to-learn sessions, etc.

Thus, curriculum design brings together approach (theory) and practice (method). We may share theories of adult education with colleagues, but our methods may be different. The methods you use to design curriculum determine how you

- select and organize content
- design learning tasks and activities
- set out the roles of learners, teachers, and instructional materials
- assess understanding, performance, and progress
- evaluate how effective the design is

The curriculum continuum

Workplace education curriculum design can be shown as a continuum.* At one end are programs with pre-selected and pre-organized content and activities — designed to yield predetermined outcomes. For example, courses for high school diploma or computer literacy are commonly part of an education initiative. They are often predetermined and textbook- or software-driven, but they usually offer the only way to earn recognized credit.

Some boards of education in Ontario are experimenting with alternatives in gaining high school credits. The Ottawa Board of Education gave credits to employees at Island Lodge Nursing Home for an employee handbook written and designed by employees in a co-op workplace education program.

*For a detailed examination of the continuum, see Katherine Schultz’s paper “Training for Basic Skills or Educating Workers?”

At the other end of the continuum learners collaborate with educators and other interested parties throughout the planning cycle.

A workplace might have programs from across the continuum operating simultaneously. For example, some employees could be working toward a high school diploma, while others engage in group decision making and teamwork, and still others pursue job-specific training in inventory control.



The rest of this chapter concentrates on curriculum design geared directly to the workplace and the workforce. First, we look at two very different models: performance-based training, which comes midway on the continuum, and participatory curriculum design.

Performance-based training

Performance-based training emphasizes proficiency in essential job tasks. The curriculum is based on precise tasks learned in sequence and tested against a criterion of competent performance. Training is often coupled with *functional context learning*, which uses the knowledge and skills demanded by a job as a basis for instruction. Efficient improvement of employee performance is the main goal.

Performance-based training is most successful as one part of a workplace development initiative that aims for collaboration and participation across the spectrum of the workplace. Realizing good practice in workplace education (described in Chapter 2) requires more than performance-based training can offer by itself. But within the initiative, it becomes one of several means of educational outreach and service.

Curriculum development for performance-based training often depends on identifying the basic skills required in each aspect of the job (see task analysis, Chapter 3, page 20). Job-specific materials and simulations help learners improve their competency on the job by developing their reading, writing, oral, math, and reasoning skills.

Although training content is largely determined by an analyst or trainer with expertise in the relevant subject, employees can have some influence in the choice of content and style of

You might see performance-based training referred to as *competency-based training*.

**One of many useful tools in
workplace education**

Measuring performance objectives

learning. Curriculum designers may depend heavily on employees' descriptions of their jobs, inventories of tasks, and the basic skills used. They may also use employee self-assessments. As in any program, different learning styles can be accommodated by instructors with ample resources and time.

Performance objectives for learning can be demonstrated or measured with accuracy. Most often, meeting such objectives requires a change in behaviour rather than in attitude, perspective, or approach. This behaviour change is then noted and judged by a supervisor, trainer, or instructor. With improved employee performance as the goal, unrelated skills or inquiry into other aspects of work are often not included in the curriculum design.

For instance, a performance objective might be *to effectively use aural and oral communication skills on the job for requesting, receiving, clarifying, and delivering information*. One skill-building activity would have learners demonstrate that they could understand oral instructions, clarify when necessary, and pass on the correct information. In this case evaluation is by teacher or peer observation and group discussion (from Mottershead and Erickson, 1989).

In the following case study a performance-based training program was mounted as the latest in a series of education programs at a major manufacturing site. It was not an isolated quick fix but part of a well-established partnership of the company, its employees, and the educators. This is just one part of an education plan that has evolved over the years of the partnership to serve the whole workplace.

A workplace needs assessment undertaken a few years earlier had set long- and short-term goals for the company as it approached organizational and technological change. First, an ongoing language training program was put in place. Then, as the relationship between the company and the education provider grew, they designed Supervisory Skills Training Workshops to improve leadership, motivation, conflict resolution, and communication between management and front-line supervisors. The company also contracted Managing Diversity training (for managers and supervisors) and Conflict Management (for the office staff).

Case study

Distinctive features:

- short, concentrated training
- structured, sequenced learning
- shop-floor applications and follow-up
- collaboration of computer specialist and basic skills trainer

Performance-based training for new technology

The workplace program unit of the Etobicoke Board of Education in Ontario has provided a variety of education services for Foamex Canada Inc., a major manufacturer of flexible polyurethane foam. A recent performance-based training program helped employees use computers and laser scanners for bar coding inventory items.

The introduction of computer bar coding involved receivers and shippers as well as production workers. Materials received from outside sources had to be scanned, given Foamex inventory control tags, and entered into a database. Articles manufactured at Foamex were assigned computer-printed tags and entered into the database.

The basic-skills trainer was responsible for ensuring that employees would be comfortable and accurate in the new system. He provided clear-language documents and instruction geared to the wide range of abilities and needs of the employees. Some had never used computers or scanners before, while others had computers at home and were familiar with the technology. For some, English was their second language.

First, the computer specialist explained and demonstrated the system to the trainer. The trainer then prepared a concentrated, tightly structured five-hour program to be completed over three sessions.

The training first gave workers

exposure to the computer system, with simulations in the classroom; then came applications and follow-up on the shop floor.

- Introduction — oral and written plain language explanations of the computer system; specialized vocabulary for computers and scanners; abbreviations; assigning passwords and logging on; reading combinations of numbers and letters
- Simulations — hands-on training and practice at the computers; inputting codes; generating labels and reports; correcting errors; specialized lessons for shippers
- Applications — working at shop-floor stations (with the trainer on hand for assistance)
- Follow-up — checking (by trainer) on employee performance after a few days; further assistance from trainer if necessary

Follow-up showed that the training was well designed for the abilities and needs of employees. Furthermore, language barriers were not as serious as originally expected. Language difficulties were most evident when a problem had to be reported over the phone, and the employee had to deal with the computer department.

In summary, the design and delivery of the training was judged highly successful — it met the performance objective.



Sometimes learning is not so straightforward

Descriptions of performance-based training may give the impression that learning, like a production line, moves step by step. Training *can* succeed in such a straightforward fashion, but learning is often not linear. Learning may appear as a sequence, but it may also zigzag or look like an ever-expanding ripple that grows from the centre out. Learning can be repeated grasping for more sophisticated understanding.

Although programs may start out with purely performance-based criteria, other employee needs can surface and upset the tightly structured plan. Consider, for instance, a company's introducing new technology that will affect many aspects of the operation. Teaching solely to one job function that is changing can result in a behaviour change but not prepare employees for the next change. For this type of training to succeed in the long run it would need to be part of an inquiry into work, learning, and change.

Case study

Computerizing the hospital

The nutrition department of a large urban hospital introduces computerized menu service. The new technology will improve efficiency, give more choice to patients, and eventually help increase revenues through catering to outside groups such as Meals on Wheels.

The employees who prepare the trays now face a computer printout instead of the traditional menu card with its familiar formatting, visuals, and standard menu items. The hospital decides that some employees with little formal education will need training to work with the new system. At first the administrators consider only menu word recognition and see the training as simple and straightforward.

The employees and administrators, however, have opposing perspectives and expectations; the

instructors have even different views about what is to be learned and how to learn it. Finding the truth is difficult.

About 30 of the employees — female, immigrant, second-language speakers — have worked many years at the hospital. The majority are 40 to 60 years old. Their speaking and listening skills are adequate for work and home. Some are literate in their first languages; others are not. All depend on outside help for reading and writing in English.

Despite recommendations by the education coordinator against group testing, the hospital insists that individual assessments are too costly and time consuming. The hospital wants to keep these employees and tries to explain that, although their jobs are not in jeopardy, they must be able to use the new system.

Training will be offered, but first all the employees must be tested to see who needs to improve reading skills.

The employees hear something quite different: threats, job loss, and changes that they are not prepared to deal with.

Assessment results are skewed because the employees — following their regular practice on reading and writing tasks — openly help one another on test items. When asked to take the reading and writing course they are angry at being singled out, and resist the proposed learning plan.

The course has been offered four times; each time participants have questioned why they should be there, or openly resented having to be in a class. The employees do not see the benefit of learning to read the menu items; they don't connect learning with their lives, or believe that education can make positive changes.

Although the course was conceived as straightforward training to read computerized menus, three factors undermine this single focus: the employees don't accept being learners; the administration begins to recognize more needs for improvement; and the instructors — to keep people motivated and attending class — begin to adapt

course material to the personal needs of participants.

In one class the instructor asks the women to write stories about their lives — in Portuguese, their own language. They respond well, despite being somewhat puzzled about how this will ultimately help them read computerized menus. The instructor knows it's important to make those personal connections to writing and reading before working on such discrete and isolated items as menu vocabulary.

This will be a long process for some of the employees, who have already taken the course three or four times. The administration, on the other hand, often asks for additions to the course (such as reading newsletters, minutes, and announcements, or speaking up in meetings and making short oral presentations). Some requests that could be handled by the employees have been included, but the coordinator has called a halt to further additions to the curriculum in the interest of meeting primary goals.

The coordinator and instructors have had trouble getting the administration to understand the distinct features of adult learning and how to deal with adult learners who are reluctant to learn and hesitant to participate in a threatening exercise.



Participatory curriculum design

Learners participate actively

In collaborative workplaces teachers develop course outlines with input from WNAs, and the curriculum develops as the learners respond to and shape those outlines into learning. The participants actively negotiate course content and method as goals change and unpredictable outcomes emerge.

Ideas for this section on approach and methods are drawn from Auerbach, 1992; Carnevale et al., 1990; Jurmo, 1995; Mottershead and Erickson, 1989; Nash, 1993; Schultz, 1992. See bibliography for titles.

How would this method fit into workplace cultures?

Participatory methods are distinguished by problems posed by the teacher, analytical discussions, critical inquiry, and action to change the conditions of life and work.

Problem posing encourages participants to question assumptions, to discover common experiences and the truths behind their experiences, and to take action to improve life and work. Such action might include learning to write letters, use a computer, investigate an injury, or confront a work problem after critical inquiry. Solutions (individual or collective) are not presented by the teacher; rather, they emerge from each person's exploration and active participation within the group.

Workplaces that are receptive to worker involvement, shared decision making, and collaborative practices probably already encourage this type of learning and working. Union support is also a positive factor in participatory curriculum design.

For some workplaces, though, critical inquiry and exploration are not "on task," and actions outside the norm may not be welcome at first.

Case study

Distinctive features:

- co-worker as peer instructor
- emergent curriculum design
- basic skills embedded in relevant content
- cycle of description, analysis, and action

Fight for the Living — curriculum development in a BEST program

The United Food and Commercial Workers Union (UFCW) #459 represents workers in the H.J. Heinz plant in Leamington, Ontario. A solely union-sponsored Basic Education and Skills Training (BEST) program is led by workers in the plant. BEST is an education project of the Ontario Federation of Labour.

The Canadian Labour Congress (CLC) declared April 28 an annual National Day of Mourning to recognize the many occupational deaths, injuries, and illnesses suffered by workers. The BEST program instructor at the plant decided to use CLC materials about this special day, its

significance, and how it is marked. The materials became the catalyst for a series of worker-generated activities. One activity led naturally to the next, allowing the participants to develop skills and knowledge in several areas.

In early March the instructor introduced the Fight for the Living materials to work on reading skills. Pre-reading activities were followed by reading for specific information, comprehension checks, and sentence work. Broad discussion of the issue followed, with an investigation of local actions to mark the memorial day at the plant.

The group discovered that no actions had been planned. They decided to write a collective letter to the company explaining the CLC's two recommended symbolic acts to commemorate the day: lowering the flag to half-mast and one minute of silence. Realizing that a minute of silence would not be possible at the plant, the unionists requested only that the flag be lowered.

The company, responding positively, asked the group to make posters to inform the workers of the significance of the day and the flag at half-mast. The resulting posters were displayed on bulletin boards and walls throughout the workplace.

The participants then took up a suggestion in the materials to get more information from their local union health and safety representative. During a meeting with the rep, members of the group identified issues in their own departments to be considered by a joint health and safety committee. They documented their concerns individually in letters to the rep, who took them to the joint meeting. Shortly after, the company took action on one of the issues identified by the group.

With growing experience and confidence the group wrote a collective article for the union

newsletter explaining to their fellow workers the significance of the National Day of Mourning and the lowering of the flag.

Going out to the community, they also wrote to the local newspaper about the memorial day and the activities at Heinz on April 28. A special feature in the newspaper made the wider community aware of the workplace issue and of the symbolic act.

Finally, the participants wrote individually about the personal meaning of the day for them. One wrote a particularly insightful and moving essay that has become part of the BEST kit of materials used for the National Day of Mourning.

This series of activities illustrates the upward and outward spiralling that best characterizes methods (such as the participatory method) that grow out of collaboration. The workers developed reading, writing, and oral skills by exploring information of immediate importance to them. They gained confidence in dealing with the local union, management, and joint committee representatives. By collective examination of an issue, voicing their concerns, and engaging in action with their co-workers, this group of workers contributed to making a difference in their workplace and community.



Participatory curriculum design in a high-performance workplace

Workplaces moving to a high-performance model are shifting from hierarchical, top-down management to more decentralized team management, in which the distinct division of job tasks is disappearing. Employees used to a single-discipline job may need not only training for other job tasks but also education for a new style of management that makes them more central to decision making.

Does the style of education at your workplace complement the new high-performance requirements?

An adult educator, working on a needs assessment in a high-performance company in transition, realizes that the young, inexperienced workforce is having trouble adjusting to the changes. Their own education and work experience have not provided the historical perspective and socioeconomic framework to understand the new workplace. Much of the training offered by the company uses traditional adult teaching methods that stand in stark contrast to the style of work that employees are now engaged in.

The educator proposes an introductory course that examines two issues fundamental to workplace education: understanding work — old and new contexts; and understanding education and learning — traditional schooling and participatory workplace education.

The course involves reading about, discussing, and writing about the transformation of work and approaches to adult learning in high-performance North American workplaces. The participants begin by examining the relationship between their own work experience and learning. What is the relationship between their education and their company's new model of work organization?

Participants are able to consider how a broad view of education rather than a narrowly focused training model relates to their new work style. The educator hopes that this form of inquiry opens the door to a different kind of learning in which the participants become engaged and actively participate for the rest of their lives.

Other models of curriculum design — moving through the continuum

Flexibility & variety suit the learning culture

Curriculum design embraces a variety of methods, and new models are developing as learning cultures become more common in the workplace. Needs assessments often reveal interest in different kinds of learning for both work and personal development. Your responsibility is to cater to as many needs as possible; one method might suit discrete task learning, while another works for critical inquiry. Both may occur repeatedly throughout a learning cycle. Furthermore, any group of adult learners will likely yield a variety of preferred learning styles. Varying your methods also gives those learners a range of opportunities.

Case study

Distinctive features:

- five different basic skills programs — viewed as essential to overall training plans
- support from company training coordinator instrumental to program success
- extensive, ongoing training opportunities

The following two case studies illustrate how different goals and methods of instruction can satisfy the needs and interests of participants.

Multiple programs in a manufacturing company

CIMCO Manufacturing in Toronto designs and makes air conditioning and refrigeration equipment for industry, sport, and recreation. CIMCO has made a commitment to continuing training for all of its employees.

The variety of courses offered on site certainly gives education and training a high profile. Basic skills programs, recognized as essential to comprehensive and ongoing training, have been offered for five years along with Just in Time training, blueprint reading, welding, machine shop, millwright, forklift safety, and other job-specific programs.

Basic skills courses, put on by the Continuing Education Department of the Toronto Board of Education, have included English as a Second Language, Math Refresher, Communications in the Workplace, and Signing for the Hearing Impaired.

Workplace education at CIMCO began with a work-related ESL program. Initially, the instructor worked closely with lead hands and used production manuals and job-related print material to design a Language for Work program. Now into its fifth year, and in response to growing interests of the participants, this program has expanded to include more exploration of personal development; social, political, and economic issues; health;

company and industry history; native peoples; and many more topics. Work-related topics include the Just in Time program and production systems.

One of the recommendations from the communications needs assessment was to request the Canadian Hearing Society to help employees communicate with hearing-impaired people. Management asked for a signing course, which attracted not only employees with hearing difficulties, but also participants from a variety of employee groups, including the ESL class. As a result, hearing employees found a new way to communicate with their co-workers on the noise-filled shop floors.

Recently, adult basic education programs in math and oral or written communication have been added. They are available in six-week cycles, as are the on-site job-specific training programs.

The training coordinator, a union member, has been instrumental to the program through his support, availability, and input to curriculum design. The instructor and coordinator have met regularly to develop and implement a communication and math program relevant to ongoing changes in the company.

The communication course concentrates on the writing and oral skills needed to work effectively in

Case study

Distinctive features:

- specific group of union members
- literacy task analysis for union job
- research, needs assessments, and ongoing collaboration to define curriculum

a Just in Time structure. Because participation in meetings is central to this structure, the skills practised include taking minutes, summarizing information, making group decisions, etc. The training coordinator helped design the math refresher program to emphasize multiple-function problem solving, which

requires knowledge and use of fractions, costing, measuring, and other math skills necessary for team production.

The courses continue to be successful avenues to personal development, job-skills improvement, and preparation for in-house training programs.

Case Study: Communication skills course for union stewards

The Amalgamated Clothing and Textile Workers Union (ACTWU), Local 459 (Manitoba), carried out an extensive needs assessment of the communication skills necessary for participation in union activities. The union also wanted to identify barriers that prevented members from participating fully in union activities. One program suggested by the needs assessment was a communication course for union stewards.

The union was in a state of transition when the education initiative began. Long-standing practice had the stewards referring all major complaints from the shop floor to the central office staff. During contract negotiations a lack of day-to-day experience solving shop floor problems often left the stewards unprepared and unwilling to participate in shaping union demands and strategies. New union management supported a less centralized system that would use more of the experience, skills, and dedication of the stewards in problem solving and contract negotiations.

The first step for the project steering committee was to research, define, and draft new job duties for

stewards and Joint Council (executive) representatives. A literacy task analysis of the new duties, with further input from a Joint Council retreat, defined the needs.

Union members identified speaking, listening, and writing as key communication skills in which they could use improvement. Stewards would have to provide accurate information on health and safety, be effective on the shop floor and in Joint Council meetings, deal with supervisors, and participate actively in union meetings.

In a focus group, stewards who signed up for the program were asked to identify their personal learning priorities for communication skills, as well as job situations requiring these skills. Their input was used with the results of the other investigations to draft the course outline.

The strategy was to improve union participation through developing communication skills as well as thinking and problem-solving skills related to union activities.

Following are listed some of the specific objectives for participants in the education program.

Speaking and listening

- to speak effectively at union meetings
- to explain to members the importance of attending union meetings
- to respond to members' complaints with accurate information
- to listen well
- to understand members' complaints
- to follow and understand the procedures and information presented at meetings
- to report complaints
- to help members calculate their benefits and pensions
- to acquire the math skills required for participation in negotiations

Writing**Math**

❖ *Integration*

Retraining and cross-training are now commonplace demands in workplaces across the country. Employees see that their job prospects depend on skill mobility within their own industries and want to qualify for the required training. Some do not have the basic skills necessary to complete training that would lead to promotions, different jobs, or even maintaining the jobs they have now.

Basic skills integrated with job-specific training

This model can work with any course (health and safety, customer service, or equity training, for example).

One successful program model integrates basic skills and existing job-specific training. Trades training, especially in construction, has made significant progress using this model. Apprenticeships, requiring a set amount of classroom learning every year, provide a natural link with basic skills.

Integration depends on teamwork between the job-skills trainer and the basic skills instructor or facilitator. Teamwork can take many forms — team teaching, tutor support, note taking, small-group facilitation, staff development for the trainers in integrating basic skills — and will vary with the workplace and the people involved.

Case study

Distinctive features:

- multifaceted plan to integrate construction skills training and literacy
- instructor-training resource kit
- comprehensive Blueprint Reading course, including materials adapted for literacy upgrading and teacher-training materials for the instructor

Curriculum materials for the Blueprint Reading course are available as well as the instructor-training resource kit.

Integrating literacy training with a construction skills program

The Labourers' International Union of North America (LIUNA), Local 183 (Ontario), designed a multifaceted literacy project to meet the basic-skills needs of construction workers for job-specific training. The project provides assistance for both instructors and workers in courses at the LIUNA Training and Rehabilitation Centre in Toronto. Instructors learn how to integrate basic skills with their subject matter, and workers benefit from courses that upgrade their basic skills and deliver the job-specific training as well.

Instructor surveys and a literacy task analysis preceded development of the instructor-training resource kit. The kit can be used for independent study by an instructor or for staff development in workshops. The step-by-step format guides instructors through developing and teaching their particular construction skills program.

The first three units of the kit introduce workplace literacy; investigate learning theories, principles,

styles, and barriers; and describe the adult learner and the best conditions for successful learning. The next three units demonstrate how to find out learners' needs through needs assessments and literacy task analyses; how to write objectives for training based on those needs; and how to create effective lesson plans combining content and basic-skills building. The remaining units cover methods of training; techniques for presentation of material; motivation and classroom management; and evaluation types and methods.

Blueprint Reading instructors also benefit from additional resources developed as part of the course curriculum. These resources help the instructor support or clarify information through basic skills, suggest teaching strategies to help develop basic skills, and include instructional aid sheets for specific topics. The materials are organized according to basic skills categories and are cross-referenced in the Blueprint Reading curriculum.



❖ Setting objectives

Whichever methods of curriculum design you use, it is important to set objectives before you list and design individual learning activities. Objectives define the framework that gives purpose and direction to specific tasks. They will form the basis of your ongoing and end-of-program evaluation.

Information from the needs assessments will help you assign priorities for the program and organize subject matter by broad categories such as communication or math skills (speaking, writing, fractions, etc.), job-related skills, personal development, or themes.

Objectives can be performance based or they can lead to inquiries into themes and topics. In the latter form, as shown in the participatory model, performance-based tasks such as oral presentations or letter writing may emerge.

Achievement of objectives can be shown or measured by products (as with portfolios), by performance at work or in the classroom, or by testimony. For example, meeting the objective of increasing self-confidence can be demonstrated by self-assessment, commentary from supervisors and instructors, and reports of events that indicate positive change.

A statement of program objectives can serve as a basis for discussion with participants in the program, with the advisory or education committee, and with the management and union personnel directly connected with the participants. Their collaboration and confirmation of the objectives is important for ongoing support.

You can then design tasks or activities to help learners reach the objectives through practice, monitoring, inquiry, analysis, and action.

Chapter

Commercially prepared materials

Computers

Do it yourself

Developing and Using Materials for the Workplace

Materials development in the workplace, like program design, is shaped by both the workplace environment and the participants. You'll want to incorporate the most appropriate type of materials for learning.

Commercially prepared materials or generic in-house materials (for upgrading math, language, or writing) are useful for multi-level classes and to learners working on their own. They can reduce preparation time, freeing the teacher to work with individual learners. Participants can come to learning centres with their own study materials from correspondence courses or other textbook-oriented programs (high school credit courses or GED preparation often require specific texts).

Many workplaces use computer-assisted learning with preprogrammed software. Learners, especially those completing secondary school diplomas, are often enticed by the opportunity to study in a completely new learning environment, with different tools, and at their own pace. Setting their own pace gives them control over at least one aspect of education. Although learners may have no choice in materials or method, the computer offers a return to education and a way to build the confidence necessary to make changes in their lives. Workplace educators and learners can build on these advantages.

In one workplace, employees began with a computer software program, but then asked for more reading and discussion sessions to satisfy their desire for knowledge.

This chapter deals with creating learning materials. We discuss how to use authentic materials and situations from work and personal life. We show you how to use workplace experiences and issues as vehicles for exploration and decision making. The case studies cover a range of settings, modes of delivery, content emphasis, and accomplishments. First, consider your own experience with materials development, your resources, and your preferences.

❖ *Examine your own practice*

Where do most of your materials come from? Possible sources include publishers, workplaces, a shared pool of teacher-made materials, your custom-made materials, learner-teacher collaborations.

- *What kinds of materials have generated the most interest and learning in your workplace programs?*
- *Which ones have best matched participants' needs with their learning styles?*
- *How have outcomes differed by using different materials?*
- *Have learners contributed to materials development? How?*
- *Has your choice of materials changed, or have your materials development practices changed? Why? Are you and the learners satisfied with the changes?*

List some of the positive and negative factors in your current choice of materials and materials development.

❖ *Authentic materials and situations — tools for your trade*

Materials

See page 19 (Chapter 3) for a checklist of workplace materials that you can collect.

Authentic materials are what people use in their work, homes, and community life. In the workplace they would typically be reports, memos, job-specific print materials, video, posters, computer program information. They give you background about the company, union, products, services, relationships, and the like. Some of them can be used to develop learning activities.

Authentic materials from the home and community can help you understand the lives and experiences of your participants. Letters and notices from government offices, schools, neighbours, friends, and relatives are valuable tools for uncovering problems and issues of concern.

What do your participants want and need to read, write, and calculate? Tax forms, telephone books, classified ads, newspapers, editorials, short stories, grocery budgets — the list is endless. Your WNA and individual needs assessments give you

Situations

access to these, but the participants themselves ultimately determine which materials are most relevant and useful to learning.

Similarly, authentic situations are those encounters and interactions that learners have both in and away from the workplace. These situations command attention when they present difficulties, incur conflict, or point out the need for new or improved skills. Speaking to a co-worker about a persistent problem, presenting a thoughtful argument for change to a supervisor, listening to a contrary opinion with real understanding, dealing with a neighbourhood issue, organizing a company event, going through a performance review, talking on the phone in a second language — once again, the participants can choose the situations that should receive attention.

Your approach to education and your methods of teaching determine what you do with such tools. The same tool can serve a training end (performance or product) as well as critical inquiry.

A tool from home life — tax forms

Lessons on filling out tax forms begin with reading the instructions, locating numerical information, calculating, and checking for errors. Tax forms also require people to categorize and interpret information. (Ask, for example, *Does this item relate to my situation?*)

A simple request for help with the forms led an instructor to develop a unit on taxes. Participants asked questions that no one could answer about taxes and benefits. Their interest began a process of research and inquiry for the whole group.

They reviewed graphs of the federal and provincial budgets as well as statistical information about categories of earners. They compared tax revenues from individuals and corporations. They compared their own priorities for spending tax revenues with those of the government and its critics. Participants from other countries explained different approaches to taxing and distributing wealth.

Their research and discussion revealed a complex web that held no easy answers to their questions. But they all gained knowledge through the research, explained to each other their understanding

of the issues, and found patterns in tax policies. While they may not have gained financially, they practised the skills needed to make informed choices.

A tool from work — employee involvement policy

During the WNA in a corporate setting, a teacher was given Employee Involvement, a pamphlet that explained the company's policy on quality management. Although the company offered management training to other companies, its own house was not in order. Departments differed in management styles, in decision-making structures, and in employee participation in change. Many of the problems that employees brought up in class for discussion stemmed from these differences.

The teacher used the company's policy pamphlet as the tool for reading and discussion. For a pre-reading task participants first described the management style in their own departments. Then they read the policy to understand the company's management theory. They assessed their own departments based on the criteria in the policy. Finally, they were invited to record their findings in their confidential journals as a follow-up writing task.

These tasks were crucial in giving the participants the knowledge and confidence to participate more actively in department meetings, to ask questions, and suggest change.

A tool from work — computer bar coding system

In the bar coding case study in Chapters 3 (page 22) and 4 (page 33) the participants were preparing for a new system of manufacturing.

Their basic skills needs were identified in relation to the new demands in their jobs and to using the computer programs that would be installed. Their learning was performance based in a highly specialized environment.

The trainer used the authentic computer codes, labels, reports, and procedures to introduce employees to the system. Their own familiarity with number and letter sequences and with computers provided a base for the new scanner and computer information.

During simulations the employees got hands-on practice and were able to learn from mistakes. Finally, they applied their new skills on the shop floor.

❖ *Structuring a learning activity*

See the learning spiral in the Figure opposite.

Use the checklist on page 50 to keep thinking collaboratively.

Although they use different methods and tools, the three examples you have just read have commonalities. A learning spiral leads participants from their own experience to new knowledge and skills. They are able to use and reflect upon their new ways of thinking and new practices — and apply them in new situations. In that respect this spiral is similar to the one described in Chapter 4 (p. 29) for curriculum design.

In our learning spiral the learners and the instructor collaborate at each stage. The guidelines on page 50 describe a participation model for instructors and participants working together.

❖ *Examine your own practice . . . then practice*

Think of one of your recent learning activities.

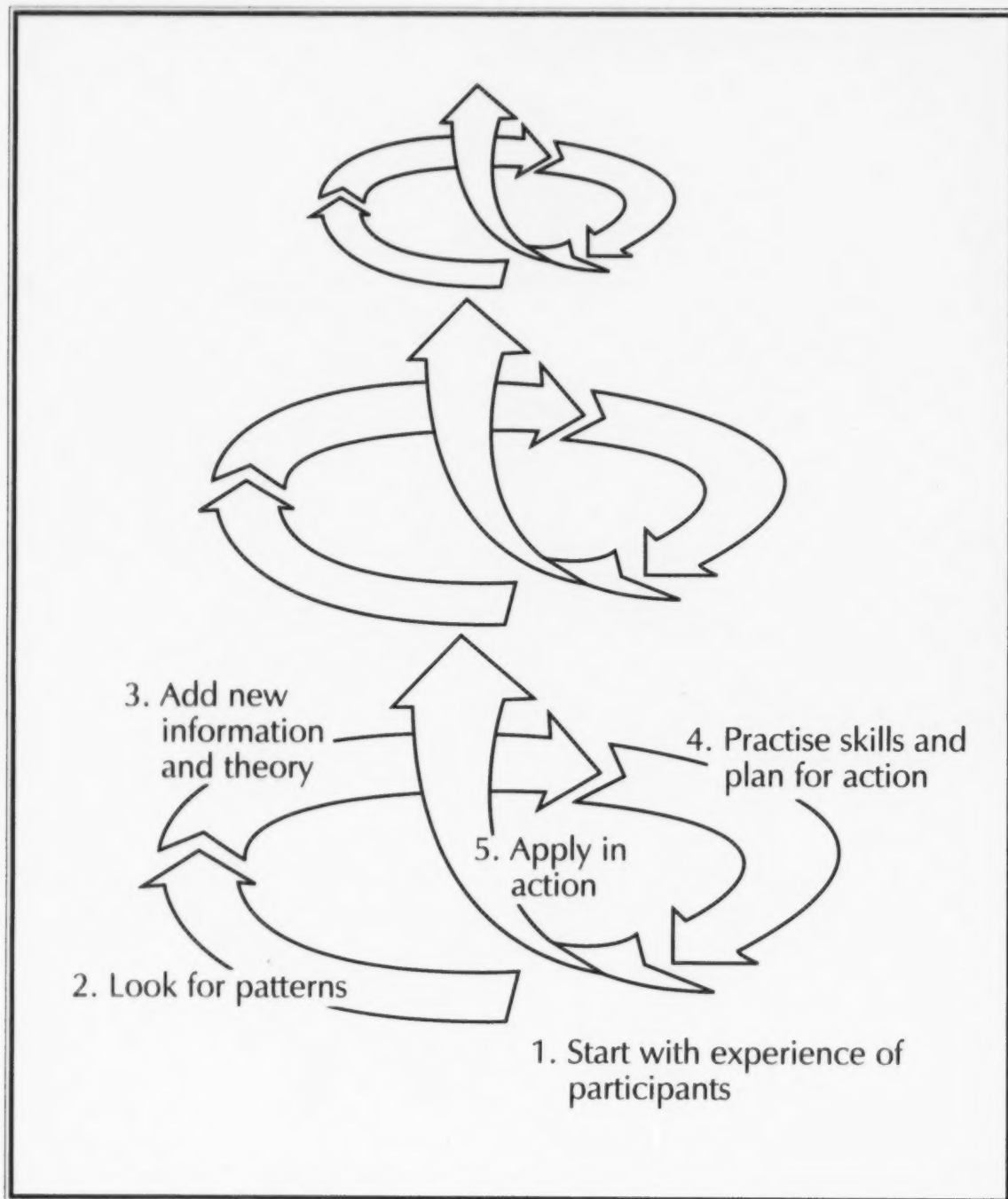
- Which parts were participants most actively engaged in? Why?
- How did you prepare participants for the introduction of new material?
- How did you combine subject matter and basic skills practice?
- What unexpected issues, difficulties, successes emerged? How did you handle them?

Is our participatory model similar to how you structure learning activities in your own teaching?

- If not, what is different and why?
- Does this model offer any additional benefits to your planning?
- What can you add to the learning spiral of tasks?

Take an example of authentic material from your workplace and develop activities to use it as a tool for learning. Follow the examples shown previously, and use the guidelines (p. 50) for structuring a learning activity.

The "learning spiral"



Checklist

Collaborating on Learning : guidelines for instructors and participants working together

- ☐ **Write objectives** — global and specific
- ☐ **Start with the knowledge and experience of participants** — tasks could include exploring the theme, stating problems, demonstrating and solidifying math skills they already have, previewing reading content, discussing preparations for writing, and so on.
- ☐ **Identify common knowledge, attitudes, and skills** that are the foundation for new learning. What patterns emerge from learners' experiences and opinions about a topic? What are common attitudes toward this topic? What common strengths in skills are needed for this activity?
- ☐ **Introduce new skills to be learned, new information, and ideas** — make links to what people know, have experienced, and can already do. Reading, writing, oral, and math activities succeed when they can foster understanding and relate to real issues.
- ☐ **Practice skills and integrate new information and ideas** with what people already know — through group tasks, role playing, simulations, group discussion, individual tasks, independent study, short oral presentations, varieties of reading, writing, and oral experiences, real-world math problems, and skill-building math exercises.
- ☐ **Evaluate and reflect** on what participants have learned. Consider its purpose, usefulness, and value — ongoing, at the end of sessions, in weekly journals, in group discussions. Maintain an openness to revise the objectives if necessary.
- ☐ **Apply new skills and knowledge** in new situations or in action for change. Follow up with regular interviews and report-back sessions. Continue evaluating, revising, and reshaping curriculum.

❖ *Integrated and content-based programs*

The case studies in this chapter are teaching oriented, as is the BEST program case study in Chapter 4. They demonstrate how subject matter is covered, how workplace materials are incorporated, and how basic skills are treated in the program.

To determine how basic skills fit into *your* program, think of your position. Are you a subject teacher or technical, job-specific trainer who wants to integrate basic skills upgrading with your lessons? We refer to this type of program as *integrated*. Or are you a basic skills teacher using and adapting work-related materials for basic skills practice? We refer to this program as *content based*.

If you are a subject teacher your main purpose is to engage learners in the theory and practice of your subject. Your attention to their basic skills needs should enable them to better understand the subject matter as they practice and improve their reading, writing, thinking, and math skills.

If you are a basic skills teacher you are primarily interested in developing skills, using content as a vehicle. While you want to explore relevant themes and topics, you structure lessons so that there are ample opportunities to help learners develop their basic skills.

In previous chapters we considered approaches to adult education and methods of curriculum design that put theories to the practice. This discussion of content and the teacher's role* is another way of examining curriculum development in workplaces.

Integrated models

The relationship between content, skills, and teacher's role is a matter of emphasis and structural design. The LIUNA Blueprint Reading course (Chapter 4), SkillPlan's Concrete Words (Chapter 2), the Auto Parts Industry Training (Chapter 2), and the following case study illustrate the integration of

*For a thorough examination of this topic, see Bernard Mohan's *Language and Content*.

Case study

Distinctive features:

- basic skills integrated with cook's knowledge and skills
- five-way partnership
- support services for multi-level population
- job placement

Curriculum materials are available from Joanne Eaves, Centre for Wellness and Education, New Westminster, BC

basic-skills instruction and practice with prescribed courses of study. The courses are reshaped with an added emphasis on basic skills, while the participants still gain their credits or diplomas. The curriculum content drives the practice of math, reading, writing, listening, and speaking skills.

Literacy and cooking

Literacy and Cooking is an eight-month training program in New Westminster, British Columbia, for a cook's position or the first level of a chef apprenticeship. It is a five-way partnership: funding from the federal government; sponsorship by the United Food and Commercial Workers Union, Local 2000; kitchen space from the New Westminster School Board; support from and links with the restaurant industry; and training through the Centre for Wellness and Education. The participants are displaced workers or people who want to return to the workforce after a long absence.

The curriculum integrates basic skills with a training program that teaches cooking skills for jobs in restaurants, hospitals, catering, tug-boats, etc. Participants spend the first two months of study with the basic skills instructor on the cook's training manual, personal development, and introduction to computers. The next five months include a six-week introduction to the kitchen with part-time study, then full-time in the kitchen with the cooking instructor, a chef. The final month is spent on job placement.

In the initial phase basic skills and cooking subject matter are interwoven. Math includes metric conversion, measurements needed in the kitchen, fractions and percentages

for adjusting recipes, and basic calculator use. Reading covers different types of cooking, research in the library, and background reading for industry interviews that participants will conduct.

A major project involves library research and a written report on one aspect of cooking. Some projects have included reports on the structural hierarchy in apprenticeship training, an essay on the history of herbs and spices, and a biographical essay plus video on native cooking. Writing skills are also developed through work on job descriptions and résumés, letter writing, and journal writing. Oral communication skills are highlighted in a tour of a major hotel kitchen and in interviews (reported back in class) with industry representatives, employers, and chefs.

Test-taking skills are also built into the first three-month phase to prepare participants for the cooking tests and the final exam that are required for this first level of training. Because the apprenticeship program requires Grade 12, GED preparation is also available for those who need it.

As classes are often multi-levelled, peer tutoring and volunteer tutoring are organized early in the program. Small-group activities, which foster active involvement and

co-operation, are common in the classroom portion of the course. The

Centre also has evening drop-in hours for math and English support.



Content-based models

In content-based programs companies, unions, and employees recognize the need for improved basic skills, and the programs draw on relevant work or personal materials to teach those skills. The next three case studies illustrate this education model.

Case study

Distinctive features:

- small-business franchise in fast-food industry
- diverse workforce and diverse client group
- content-based basic-skills instruction
- on-the-job training for employees and managers and pre-employment training for unemployed workers

Basic skills training for small business

Praxis Adult Training and Skills Development worked with Subway Sandwiches and Salads to examine training requirements in franchises. After an extensive organizational needs assessment Praxis designed a program of on-the-job training for front-line workers and their managers.

Although Subway's head office collaborated on developing the program, the decision to participate in training was up to individual franchisees, their employees, and their managers. Franchisees who understood the importance of training and investing in employees were the first to respond. The training was developed, undertaken, and evaluated in Ontario.

Basic Skills Training for Small Business has three components: on-the-job training for employees, training for managers, and pre-employment training for unemployed workers in the community.

The basic-skills training for the employees looks at job-specific tasks as well as current issues in the food service industry. The goal is to improve the basic skills of Subway front-line staff in communications (reading, writing, listening, and speaking), math, problem solving, and job performance. Job-specific objectives include dealing with customers, getting along with management and co-workers, and handling paperwork and common procedures (cash, inventory, etc.).

The employee component has three tools: a reader, course materials, and instructor's manual. The reader *Working in the Fast Food Industry* helps participants explore issues of the industry. Fifteen articles from newspapers and trade journals — rewritten in plain language — cover such topics as health, marketing, the environment, customer service, and women in franchises. The reader includes work sheets

for reading comprehension, word study, and follow-up writing.

Employee course materials provide exercises to develop basic skills and job performance skills. The exercises replicate the complex set of activities that Subway staff have to deal with regularly — customer service, food preparation, paperwork, and staff relations. They reflect the job — tasks that are varied yet interconnected.

The instructor's manual defines objectives for lessons, activities to meet the objectives, and a step-by-step method to use the materials. Activities range from large- and small-group work to independent study and peer tutoring.

Training for managers is also content based, developing basic skills along with improving the supervisory skills needed for managing or owning a franchise. Objectives include managing a culturally diverse workforce; operating in a culturally

diverse marketplace; finding, selecting, and hiring employees; motivating, training, and evaluating staff.

A participant's guide and facilitator's guide organize this component. Discussion, role playing, and reading and writing activities engage the participants in relevant content and skills practice simultaneously. For instance, activities on hiring employees include discussing methods for finding candidates; reading the Human Rights Code for legal information; playing roles to learn effective interviewing techniques; and reviewing various application forms for clear language and suitable questions.

The pre-employment basic-skills training component relates to the broad food-service industry. Materials include information on restaurants and catering as well as fast food establishments. Life skills and job search are also part of this community-based outreach program.

Case study

Distinctive features:

- focused, product-oriented project
- writing skills improvement for food-service employees
- family-owned general store complex in rural tourism area
- personable service and competitiveness

**Adapted from Workplace Upgrading in Nova Scotia, Literacy Section of Nova Scotia Department of Education and Culture.*

Employee handbook for a general store in a rural area*

The Literacy Section of the Nova Scotia Department of Education and Culture forms partnerships with local businesses and unions to promote and offer workplace education programs. For an initial upgrading program, a group of employees in a general store on Nova Scotia's Eastern Shore embarked on a product-oriented project — to make an employee-written company handbook.

The general store is actually a complex that offers many varied services to the community and tourists. It includes a hardware store,

post office, insurance office, dining room, coffee shop, gas bar, and motel. The handbook project was the work of employees in the coffee shop and dining room.

With increasing development and tourism in the area the owner anticipated more business for his complex, which had been losing trade to a nearby urban centre. The owner had managed all aspects of the business, supervising employees and handling all customer requests and inquiries himself. He realized that his employees should be able to handle customer service, and was

interested in how improved written communication would benefit both store operation and the employees.

The employees, while expressing an interest in a range of basic skills, decided with the owner and literacy coordinator that a project focused on rewriting the department manual would be the most useful way to deal with the issues of customer service, working cooperatively, and skills improvement.

The goals of the program were

- to produce an employee manual for the dining room and coffee shop
- to develop writing skills
- to increase cooperation among staff

Specific strategies to reach these goals included

- developing research skills — including transferring oral information into written form
- learning how to format, design, and proofread a publication

- developing teamwork through discussion, role-playing, brainstorming, and writing
- providing outside opportunities for employees to work together
- increasing the use of writing for expression and communication

The original manual was outdated. The new manual contains visual support for the text on a number of topics. Research on the history of the site provides information for tourists. The team rewrote job descriptions, compiled instructions on how to use the intercom system and how to get information from the RCMP, and transcribed word-of-mouth recipes to help ensure consistent food in both eateries.

With publication of their own handbook the staff feel confident about their job responsibilities, especially in customer relations. Having worked co-operatively on a published product they are also likely to see writing as a permanent and useful form of expression.

Case study

Distinctive features:

- rural location with mix of urban and rural workers
- irregular work schedule accommodated by different modes of delivery and outreach
- multi-levels: all levels of ESL learners, ABE
- focus on content for work and personal development

Agriculture: language, work, and personal development program

The Continental Mushroom Farm near Ottawa hosted a three-year workplace education program of learning opportunities for immigrants unable to take advantage of formal classes because of their work schedules. The participants were mostly newcomers with language and settlement needs. Also, some long-term workers were interested in more advanced basic skills.

Although some of the workers lived nearby, the majority came from urban areas by bus in the

morning and returned in the evening. Overnight mushroom growth determined how much could be picked the following day; the resulting irregular work schedule required flexibility in how and when learning could take place.

A variety of options accommodated as many workers as possible: formal classes during lunch and during work; workshops on special topics; a weekly newsletter; and discussion and assignment sessions on the morning bus.

ESL learners concentrated on ESL literacy, speaking, listening, and math. The ABE component of the curriculum had reading, writing, and math. Subject matter was a mix of work-related topics and issues of importance to the participants.

The teacher got work-related material mostly from supervisors, who were responsible for orientation, training, and hiring new pickers. The supervisors were accustomed to giving all instructions orally; work and safety procedures were not written down.

With information from pickers, supervisors, and orientation tours, the teacher compiled workbooks for the formal basic ESL classes.

The illustrated workbooks were a resource for learning about the business — the mushrooms themselves, growth, harvesting, equipment, and safety procedures. A separate workbook dealt with health and safety issues on the farm. The books provided work-related reading and writing opportunities: vocabulary; work procedures; personnel and payroll information;

cafeteria menus; sections on weighing produce, calculating, etc.

The teacher developed a weekly newsletter — a common meeting ground and forum for community input. Those in the program, along with non-participants, contributed to the newsletter. It reached out to workers at higher skill levels and to those who did not want to lose any work time by attending sessions. Special people were featured weekly along with word games, class schedules, and summaries of upcoming classes and workshops.

To accommodate participants' personal needs intensive workshops were organized on topics identified in the needs assessment and through ongoing discussions. Workshops on citizenship, the census form, and income tax forms were scheduled to suit the availability of the workers.

The variety and shape of the learning opportunities that developed in this program demonstrate how attention to context is the determining factor in a successful workplace education program.



❖ *More ideas for developing teaching and learning materials*

Although the methods of blending basic skills and subject matter vary from program to program, you can structure activities to be useful to both the subject teacher and the basic skills teacher. Here are some additional ideas for linking content and skills in materials development.*

*See Mohan's *Language and Content* for a thorough discussion on many of the following ideas.

Sequencing material

Mohan in *Language and Content* suggests three sequencing principles:

- For content — move from practical to theoretical.

	Begin with concrete examples and generalize from them. • For discourse — move from the situational to the abstract. Begin with an incident at work that requires an oral or written response by the employee. Then move on to the more abstract discussion or essay on the behaviour in general. • For learning — move from experiential to expository. Begin with experience, demonstrations, and practical tasks before using textbooks and lectures to convey information.
Time for talk	Ensure that every activity has discussion time so that participants are able to go beyond a specific experience or incident to discover the common patterns and the general or more abstract expression. This important exercise enables learners to understand and use decontextualized information such as mathematical formulas, statements of principle, values, and rules.
Visual Aids	Use charts, graphs, and drawings to transform information into more understandable forms. Visual aids should reveal the structure of the information or experience: a time line or flow chart for sequencing, a web for interconnection, a spiral for recurring patterns, and so on.
Holistic view of communication	For communication practice you can design activities that make reading, writing, listening, and speaking tasks dependent on each other rather than stand alone. By interrelating tasks you mimic real communication. For example, you hear a news item on the radio, then talk to your friends about it, read a detailed account in the newspaper, talk some more, and decide that you'll write a letter to your local councillor about the issue. Speaking and listening to others on a topic prepare you to read about it. Writing about a topic is easier and more thoughtful if you have read and discussed it beforehand. Some skills are used to preview the topic, others to describe and analyse it in depth, and yet others to review and think about it.
Understand how to read and write for the subject at hand	Whether you are the subject teacher or the basic skills teacher, you should understand the structure of written information.

Once you know the optimum structure for a type of information, you can show learners how to read for meaning and write to be understood. For example, how are instructions written for construction work, for cooking, for operating a computer system? How do they differ? What characterizes a persuasive memo arguing for a change in procedure? What counts as valid proof in a technical or scientific presentation?

Once familiar with the styles of documentation and discourse in your subject, you can develop guides for reading, writing, and even oral communication. The guides can take a number of forms: a series of questions that direct the learner to think and learn about your subject; an outline of steps; a graduated set of tasks that enable the learner to read, write, or speak about a whole piece.

Ultimately, you are trying to replicate the kind of thinking required to understand a given subject or discipline. Mohan (1986) gives an example of a series of questions that would help learners through the thinking required to read and solve word problems in math:

- *What is the problem to solve?*
- *What exactly do you have to find?*
- *What information or facts do you already have?*
- *What information is missing? What information is not necessary? (Analyse the relationship between what you know and what you have to find out.)*
- *Give the answer mathematically.*

❖ *Multi-level groups*

Financing, timing, and a wide range of participant backgrounds can lead to a diverse mix of abilities, motivation, and competence. In many workplace programs multi-level grouping is the norm rather than the exception. The case studies in this book offer the following possibilities for multi-level groupings.

Case studies lead the way

- *learning centre* — a well-stocked and well-staffed learning centre with resources for independent study, group study, tutoring, and seminars offers the greatest flexibility for

meeting individual needs.

- tutoring — peer and volunteer tutoring provide extra support for learners to keep up with the subject matter and to have extra time to practice skills.
- adult basic skills educator as a resource for subject teacher — the adult educator can offer teacher training to the subject teacher, be a note-taker in the class, provide study-skills and test-taking support, tutor individuals or small groups, give special seminars on writing or reading.
- special workshops — topic or skills sessions can offer specialized content or skills practice to learners who want and need this intensive work.

More ideas

Additional techniques for managing multi-level groups:

- small group activities — have mixed levels on tasks that can be handled by participants at their own levels. If they can all read the material their oral and written responses can be at different levels. Learners with higher-level skills can model different responses as well as offer assistance. It might be helpful to give them a brief lesson on how to model and how to assist without doing the task for the other person. Separate the levels for work on specific subject matter by skills that are appropriate to that material.
- individual work — prepare work sheets for individual work or help each person prepare an education plan that uses the available resources for a limited period of time. Set aside individual work time in every session or every second session. This allows people to pace themselves and pursue what interests them, and gives you time to work with individual learners.
- conferences — set up peer conferences for oral presentations or for writing. To help make the conferences effective offer the more skilled people training in evaluating and giving feedback. Schedule your own time with learners to give them assistance, to review education plans, and to assess progress.
- tracking progress — help learners keep abreast of how they are doing. Portfolios, journal entries about lessons and progress, and planners are common methods.
- topic files — make review and evaluation accessible for group or individual work.



Read on . . .

**This book is just a beginning —
check out the bibliography**

Our case studies provide one avenue for exploring the program resources in Ontario and across the country. The education providers and workplaces that are identified welcome your comments and questions. In the next section we have compiled a list of print resources — reference materials as well as teaching and learning materials. Read on — we hope you discover some new resources to help you grow, reflect, and revise.

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